

Work Order ID 78413

78413

Page 1

January-09-12 9:00:19 AM

Item ID: D350-636-011

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Skidtube LH

Start Date: 09/01/2012 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 23/01/2012 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals:

Process Plan: M.L.J

Date: 12/01/09

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2750	F								
D3492	C								
100		0.00							

100

DOCUMENT CONTROL

DC

Document Control

Memo 0.00

Photocopy blue file and type labels per PPP D350-636-011 CHG 006

JL M.L.J 12-2-14

S 12/01/13

78413.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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Page 2

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NS1

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1

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Reference:

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Date:

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Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

110

110

Skidtubes

Skidtubes

0.00

0.00

Skidtubes

Memo

1- Pick D2600-3 Bent

2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside
AFT end per dwg D2750

3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500",
debur.

4- Locate DT8330 off of blade fitting bolt holes and drill pilot holes for blade
fitting

5- Drill only two fwd step holes using DT9616. Ensure proper positioning.

6- Drill pilot holes as per Dwg D2750 sheet 4 (D2750-1 details).Drill using drill
Jig DT8150 & DT8863A for first side only DT8863B for second side (detail B)

7- Clecko DT8863B on second side of tube and drill pilot holes for detail B.
SECOND SIDE

8-Open up holes for Detail B to 0.375" (4 holes per side)and blade fitting
location holes to 0.500" (total of 4 holes per side) as per dwg D2750 .Open up
holes for ground handling and detail C to 0.500" (8 holes per side)

9-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to
0.297".

10-Open up holes of Detail A to 0.297" (total of 2 holes per side)

→ Jw

12-2-20

BB 12-2-20

W/O:		WORK ORDER CHANGES					
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Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

11-Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left
from bending as per QSI 004

A/R Aluminum Rod batch: M11976

12-Grind welds flush as per Dwg D2750

BG 12-01-20
CFD 12-01-23

120

120

QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

5 2/01/73

Memo

130

130

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

5 2/01/73

Memo

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Stop

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Description

Set Up/
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Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

140

140

HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

① CF 12-1-24

150

150

QC

Quality Control

QC3-Inspect Part Finish

0.00

QC7

0.00

1 0 8612-01-24

PTO →

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
12-01-24	150	SHOULD BE QC7 See B78080	B.E	12-01-24	1			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
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Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

160

Skidtubes

Skidtubes

Memo

0.00

1-Open up holes of Detail C and ground handling to 0.625" (total of 8 holes per side)
as per dwg D2750.

2-Open up holes of Detail B to 0.750" (total of 4 holes per side)
as per dwg D2750.

3- Open float hole to 0.500" (4 per side)

4-Chamfer holes of Detail B, C, ground handling and float holes per dwg D2750
(welding instructions on sheet 8)

5-Deburr and blow out all chips from inside of tube

6- Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI 015

A/R Sikaflex-291 batch: 11999
exp. date: 12/08/13

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004
(welding instructions on sheet 8)

A/R Aluminum Rod batch: M19712

9- At section AJ-AJ drill out x-bolt spacer to 0.404"

10-Grind welds flush as per Dwg D2750

12/01/12

Set 12-02-02

B 12/02/06

W/O:		WORK ORDER CHANGES							
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Page 6

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Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

11-Spot face ground handling holes section (total of 4 places per side) as per
dwg D2750

170

170

QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

S17(07/07)

180

180

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

S18(02/07)

W/O:		WORK ORDER CHANGES					
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January-09-12 9:00:19 AM

Page 7

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1

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

190

190

HandFinish

Hand Finishing

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

0.00

1

6

12/02/08

Memo

0.00

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

200

200

Powdercoat

Powder Coating

WIA480

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

10:10

Memo

0.00

START TIME:

10:00

OVEN TEMPERATURE:

3200 F

FINISH TIME:

10:40

1X/12/08 12/02/08

210

210

QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

Inspect for foreign object per QSI 024

1 BL 12-9.

W/O:		WORK ORDER CHANGES					
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January-09-12 9:00:19 AM

78413

Page 8

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Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

220

220

HandFinish

Hand Finishing

0.00

HandFinishing

0.00

Memo

1- Install inserts as per Dwg D2750

1 BL 12 2-9.

230

230

HandFinish

Hand Finishing

0.00

HandFinishing

0.00

Memo

1-Inspect for Foreign Objects

1 BL 12 2-10.

2-Spray inside of tube with "LPS-3" batch: 11/14.

3-Install blade fitting D3488-041, wearshoes and ground handling hardware as
per dwg D2750

SIKA FLEX 241

BATCH: 119508

EXP DATE: 12-8

4-assemble o'ring to plug as per dwg D3492 and apply o'ring lube
A/R 55-o'ring lube batch: 110348.

5-Coat all exposed fasteners with "LPS Procyon" batch: 114596.

W/O:		WORK ORDER CHANGES					
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January-09-12 9:00:19 AM

78413

Page 9

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Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
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Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

240

QC5- Inspect part completeness to step on W/O

0.00

S12/02/11

240

QC

Quality Control

250

Pick Kit

0.00

(1x) SP 12-02-15

250

Packaging

Packaging

260

QC4- 100% Inspect kits for completeness

0.00

S12/02/15

260

QC

Quality Control

Memo

*****ensure antiseize is on AN8C21A bolts*****

(H)

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Page 10

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NR1

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Date:

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NR2

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Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

270

270

Packaging

Packaging

Packaging

0.00

12/2/16 C

Memo

0.00

Package as per PPP D350-636-011

Rev I Fc o 72

280

280

QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

12/2/17 JF

*MF
12-02-16*

W/O:		WORK ORDER CHANGES						
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Picklist Print

Page 1

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D350-636-011

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:I 02.09.25 Rearranged procedure steps KJ
 IPP Rev:J 06-03-23 As per Rev D JLM
 IPP Rev:K 06-07.13 As per ds19343 EC
 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verf:EC
 IPP Rev:M 08-04-22 update steps 4, 13 DD verified by:EC
 IPP Rev:N 08-09-23 revF as per dwg DD verified by:ec
 IPP Rev:O 09-02-06 apply antiseize on AN8C21A bolts as per PAR09-010
 DD verf:EC IPP Rev:P 10.06.22 revise
 seq110 DD verf:EC IPP Rev:Q 10.10.01 as per IIN revH
 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3492-1		Manufactured	No			230	Each	110.0000	8	8		**	

D3492-1

Plug

Location	Loc Qty	Loc Code
FP002	110	
69531	8	
74444	2	
76235	100	

D3492-3

Manufactured No

230 Each 21.0000

8

8

**

*BL 12-2-10.****D3492-3***

Plug

Location	Loc Qty	Loc Code
FP002 77039	21	
74447	9	
74871	12	

\$.

W/O:		WORK ORDER CHANGES							
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Page 2

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D350-636-011

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1611-010

Purchased No

230 Each

179.0000

8 8

**

NAS1611-010

O-RING

BL 12-2-10.

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP <i>130305</i>	100	<i>6</i>
110915	0	<i>2</i>
120121	100	
FP001	79	
110915	14	
117460	8	
118077	1	
118612	3	
119438	47	
119623	6	

NAS1149D0863J

Purchased No

250 Each

159.0000

2 2

**

NAS1149D0863.J

WASHER

SP/12-02-15

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST298	159	
<i>118078</i>	59	
<i>119307</i>	100	<i>2x.</i>

D2744

Manufactured No

110 Each

33.0000

1 1

**

D2744

Cap

BE 12-01-20

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG002	33	
62715	1	
70881	12	
71861	20	<i>1</i>

W/O:		WORK ORDER CHANGES						
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January-09-12 9:00:23 AM

Page 3

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D350-636-011

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2600-3-BENT

Manufactured No

110

Each

18.0000

1

1

**

D2600-3-BFNT

Extrusion Bent

Location Loc Qty Loc Code

LG	18	
66875	7	
73253	1	
75021	1	
75022	1	
75023	1	
77623	7	

D2743

Manufactured No

160

Each

153.0000

8

8

**

D2743

Crossbolt Spacer

Location Loc Qty Loc Code

LG001	153	
67766	4	
68251	3	
73403	64	
74445	82	

D2739

Manufactured No

160

Each

1.0000

1

**

D2739

350 I Beam

Location Loc Qty Loc Code

LG	78898	
72155	1	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 4

January-09-12 9:00:23 AM

Work Order ID: 78413

78413
D350-636-011

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D3490-3

Manufactured No

160

Each

54.0000

4

4

**

D3490-3

Cross Bolt Spacer

BL 12-02-02

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG001	54	
74877	14	
77567	40	4

D3490-1

Manufactured No

160

Each

62.0000

4

4

**

D3490-1

Cross Bolt Spacer

BL 12-02-02

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG001	62	
62450	2	
74875	20	
77042	40	4

ALS4-1032-225

Purchased No

220

Each

1,094.000

38

38

**

BL 12-2-10.

Insert

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST281	1094	
108696	199	
110768	62	
118386	765	
118966	68	

D3793-3

Manufactured No

230

Each

13.0000

1

1

**

BL 12-2-10.

D3793-3

Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP001	13	
74528	1	
75043	12	

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-09-12 9:00:23 AM

Page 5

Work Order ID: 78413

78413
D350-636-011

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

AN8C35A

Purchased No

230 Each

80.0000

1 1

**

AN8C35A

BOLT

BK 12-2-10.

Location	Loc Qty	Loc Code
FP002	79	
115960	1	
117834 ✓	22	
118286 ✓	56	1
ST346	1	
114442	0	
115188	0	
115960	1	

D3793-1

Manufactured No

230 Each

9.0000

1 1

**

D3793-1

Wearshoe

BK 12-2-10.

Location	Loc Qty	Loc Code
FP001	77029	1
75038	9	

D3488-041

Manufactured No

230 Each

14.0000

1 1

**

D3488-041

Blade Fitting Assembly, LH

BK 12-2-10.

Location	Loc Qty	Loc Code
FP002	14	
61689	1	
69903 ✓	4	
75056 ✓	9	1

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-09-12 9:00:23 AM

Page 6

Work Order ID: 78413

78413

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D3794-3

Manufactured No

230

Each

12.0000

1

1

**

BK12-2-10.

D3794-3

Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002	78895.	12
74530	2	
74596	10	

AN6C44A

Purchased No

230

Each

76.0000

4

4

**

BK12-2-10.

AN6C44A

BOLT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FG	2	
103964	2	
ST343	74	
119125	29	
120095	20	
120143	25	

MS21083C8

Purchased No

230

Each

89.0000

1

1

**

BK12-2-10.

MS21083C8

NUT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002	1	
115884	1	
ST303	38	
115884	0	
118077	1	
118614	6	
119309	2	
119436	25	
119638	4	
ST304	50	
120142	50	

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

NOTE: Date & initial all entries

Picklist Print

Page 7

January-09-12 9:00:23 AM

Work Order ID: 78413

78413
D350-636-011

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D3536-25

Manufactured No

230

Each

17.0000

1 1

**

BL 12-2-10.

D3536-25

Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002 78902	17	1
75039	17	

D3631-1

Manufactured No

230

Each

343.0000

8 8

**

BL 12-2-10.

D3631-1

Washer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST072	343	
68062	2	
75548✓	341	8

D3791-1

Manufactured No

230

Each

20.0000

1 1

**

BL 12-2-10.

D3791-1

Wearplate

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002	20	
62239	2	
74598✓	2	
75041✓	16	1

AN960C10L

X NAS1149C0332 ✓ Purchased R

No

230

Each

0.0000

38 38

**

BL 12-2-10.

*AN960C10I *

washer

119736

130648.

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-09-12 9:00:23 AM

Page 8

Work Order ID: 78413

78413

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2745

Manufactured

No

230

Each

81.0000

8

8

**

BL12-2-10

D2745

Bushing

Location	Loc Qty	Loc Code
FP001 78597	81	
69529	1	
76142	80	

\$

AN3C5A

Purchased

No

230

Each

860.0000

34

34

**

BL12-2-10

AN3C5A

Bolt

Location	Loc Qty	Loc Code
FP001	7	
115835	7	
ST350	853	
116419	28	
117343	17	
117764	49	
117872	2	
119127 ✓	500	
119749	257	

34.

D3537-1

Manufactured

No

230

Each

24.0000

3

3

**

BL12-2-10

D3537-1

Wearpad

Location	Loc Qty	Loc Code
FP002 78591	24	
69817	5	
77036	19	

3.

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 9

January-09-12 9:00:23 AM

Work Order ID: 78413

78413
D350-636-011

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1149C0832R

Purchased

No

230

Each

319.0000

1

1

**

BL12-2-10.

NAS1149C0832R

WASHER

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST297	319	
114915	319	

AN3C6A

Purchased

No

230

Each

206.0000

4

4

**

BL12-2-10

AN3C6A

BOLT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP001 120423.	1	
111982	1	
ST351	205	
111982	2	
116419	23	
116549	2	
116704	12	
117619	10	
117688	1	
117872	5	
118422	13	
119449	100	
119749	37	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 10

January-09-12 9:00:23 AM

Work Order ID: 78413

78413
D350-636-011

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1611-013

Purchased No

230

Each

196.0000

8

8

**

BL 12-2-10.

NAS1611-013

O-RING

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	<i>10360.</i>	100	<i>8.</i>
	117291	0	
	120121	100	
FP001		96	
	116582	5	
	117291	2	
	117887	53	
	119623	36	

D3535-25

Manufactured No

230

Each

15.0000

1

1

**

BL 12-2-10.

D3535-25

Wearshoe

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP001	<i>77617</i>	15	<i>1</i>
	62233	1	
	74592	2	
	75040	12	

D3794-1

Manufactured No

230

Each

30.0000

1

1

**

BL 12-2-10.

D3794-1

Gasket

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002		30	
	74594	2	
	75042	28	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-09-12 9:00:23 AM

Page 11

Work Order ID: 78413

78413

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

MS21043-6

Purchased

No

230

Each

373.0000

4

4

**

BL 12-210

MS21043-6

NUT

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
	FG	20	
	103693	20	
	ST301	353	
	112314✓	143	H.
	117887	10	
	118384	200	

D3493-1

Manufactured

No

250

Each

15.0000

2

2

**

377573 2X SP

S *D3493-1*

Washer

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
	ST062	15	
	70697	2	
	76237	13	

MS21083C8

Purchased

No

250

Each

89.0000

2

2

**

SP 12-02-15

MS21083C8

NUT

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
	FP002	1	
	115884	1	
	ST303	38	
	115884	0	
	118077	1	
	118614	6	
	119309	2	
	119436	25	
	119638	4	
	ST304	50	
	120142	50	2X

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-09-12 9:00:23 AM

Page 12

Work Order ID: 78413

78413

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

AN8C21A

Purchased

No

250

Each

79.0000

2

2

**

SP 12-02-15

AN8C21A

BOLT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST343	79	
118758	5	
119530	24	
120094	50	

NAS1515H3L

Purchased

No

230

Each

179.0000

4

4

**

SP 12-22-10.

NAS1515H3I

WASHER

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FG	40	
102472	40	
ST277	139	
118686	3	
119438	36	
120072 ✓	100	

D2741

Manufactured

No

250

Each

16.0000

1

1

**

B76984 (x
SP 12-02-15)***D2741***

Blade, 350 Skidtube

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST	-10	
ST466	26	
71856	16	

D3532-1

Manufactured

No

250

Each

20.0000

2

**

B78839
SP 12-02-15***D3532-1***

Spacer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST065	20	
74880	20	

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2 1

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
1			1	D2750-4	SKIDTUBE WELDMENT, RH
1	1		1	D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
	4	4		D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
	38	38	38	38	ALS4-1032-225
	34	34	34	34	AN3C5A
	4	4	4	4	AN3C6A
	4	4	4	4	AN6C44A
	1	1	1	1	AN8C35A
	38	38	38	38	AN960C10L
	1	1	1	1	AN960C816L
	4	4	4	4	MS21043-6
	1	1	1	1	MS21083C8
	4	4	4	4	NUT
					NAS1515H3L
					WASHER

GENERAL NOTES:

- 1) MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- 2) FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3.
- 3) BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- 4) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: N/A
- 7) IDENTIFICATION: N/A
- 8) WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- 9) WELD PER DART QSI 004
- 10) INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES (ϕ 0.297) FOR WEARSHOE INSERTS
FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- 11) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- 12) SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL **F**
- 13) SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL **F**

CPY
CPY
CPY
CPY
CPY
CPY
CPY
CPY
M.L.S
12/01/09

RELEASED
65-2722-10

F	INCORPORATE DS1 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3535-1/3-35 (ZN C8-1); ADD D3791-1/2 WHICH REPLACES D3535-1/3-35 (ZN B8-1); WEARSHOE HOLES UNDER FW/DAFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741, QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SLOTS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S283 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	R4		
DRAWN	R4		
CHECKED			
MFG. APPR.	AP		
APPROVED	AP		
DE APPR.	AP		
DRAWING NO.	D2750	REV. F	
SHEET 1 OF 11			
TITLE	350 SKIDTUBE ASSEMBLY	SCALE	NTS
DATE	08.07.16	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUBJECT TO THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8 7 6 5 4 3 2 1

A

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

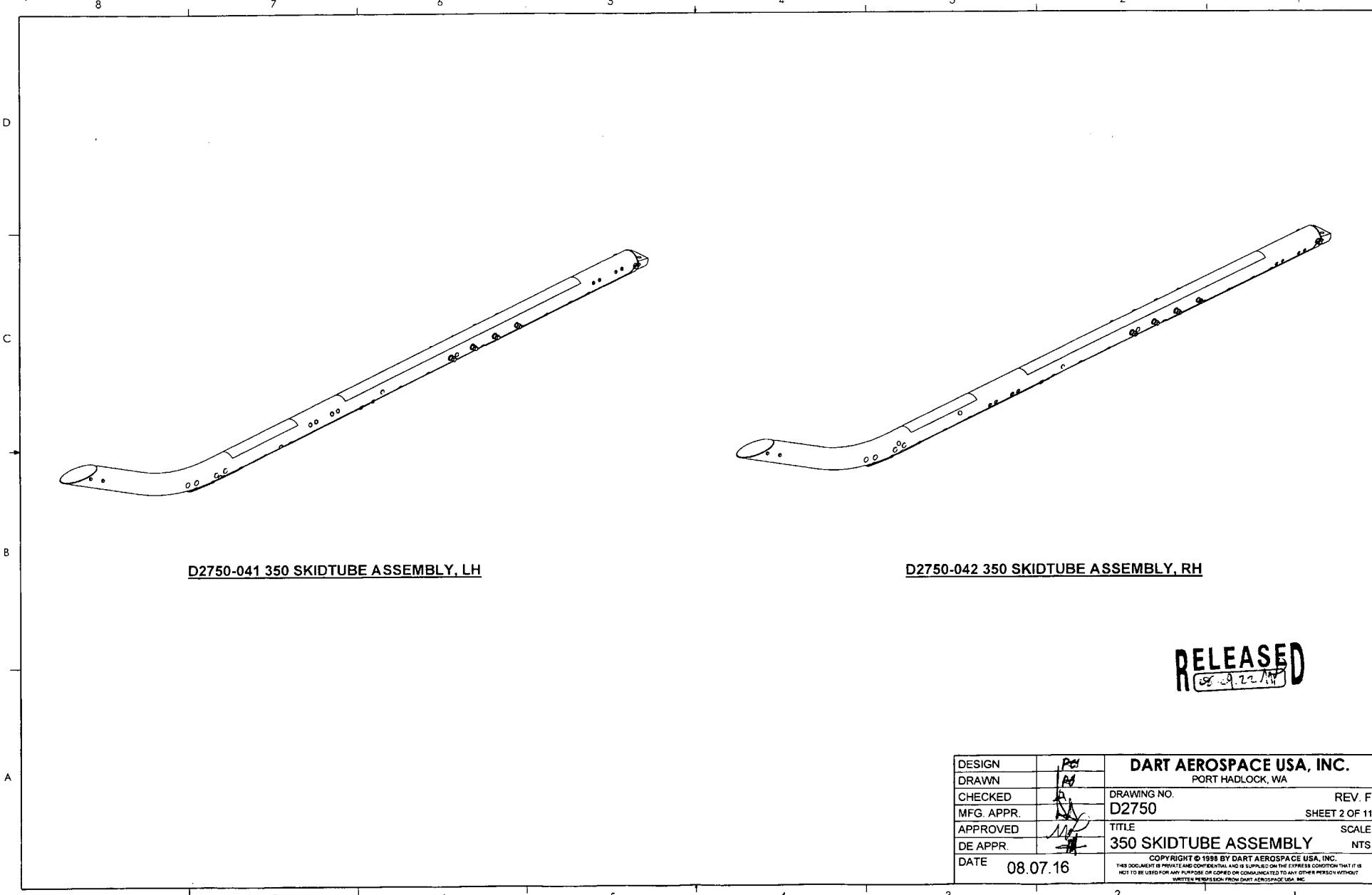
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

78413



Dart Aerospace Ltd

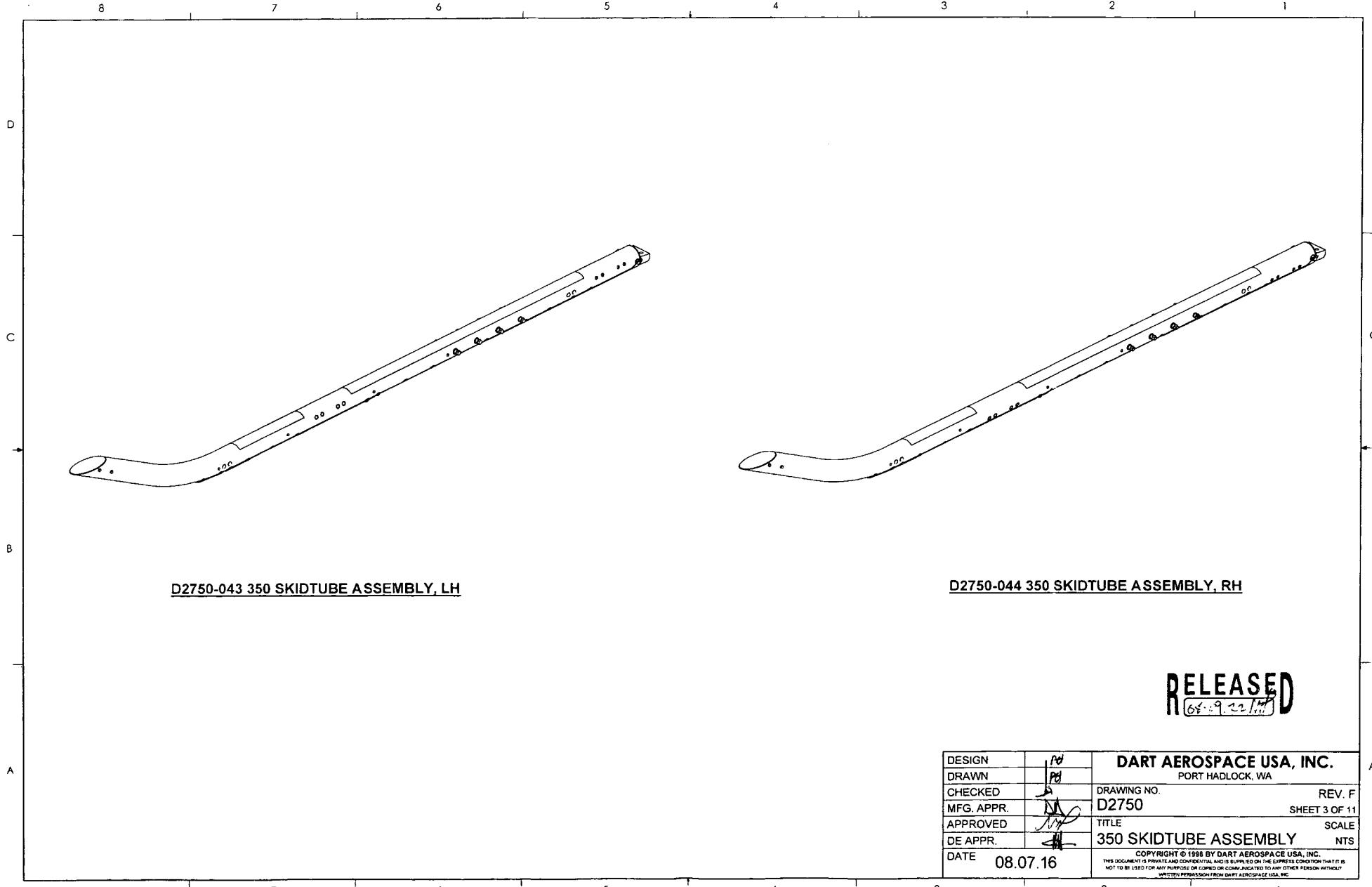
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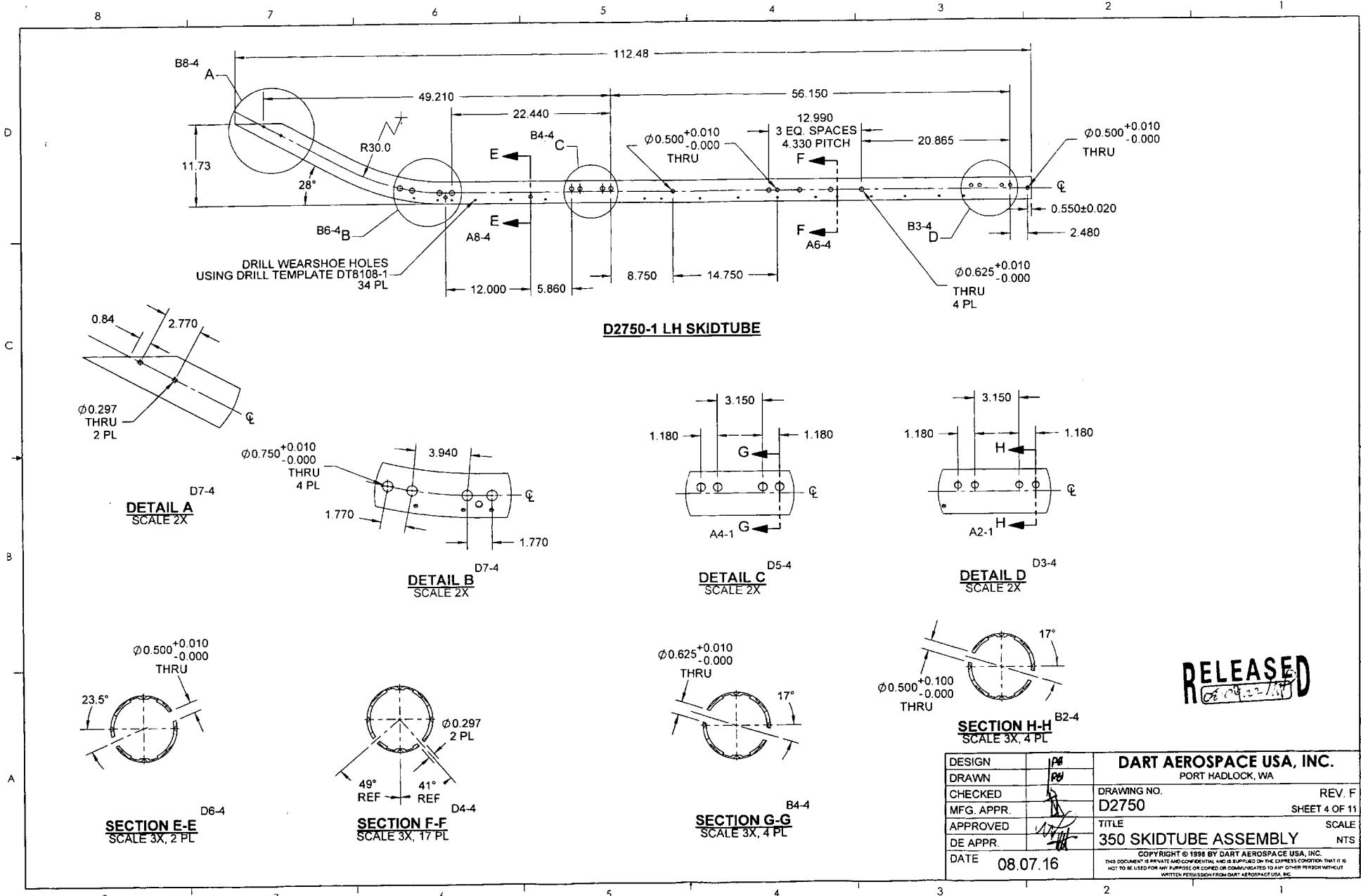
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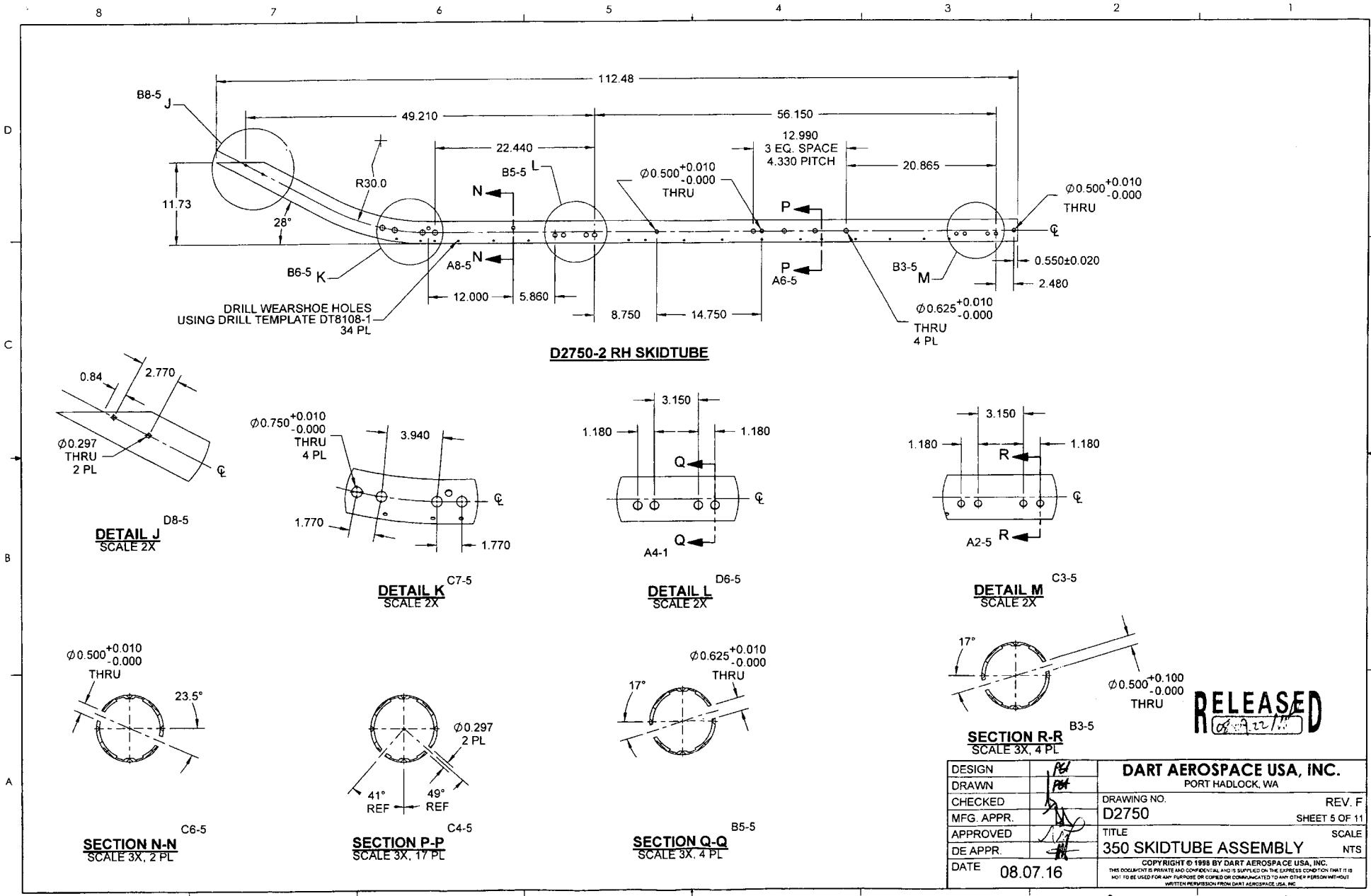
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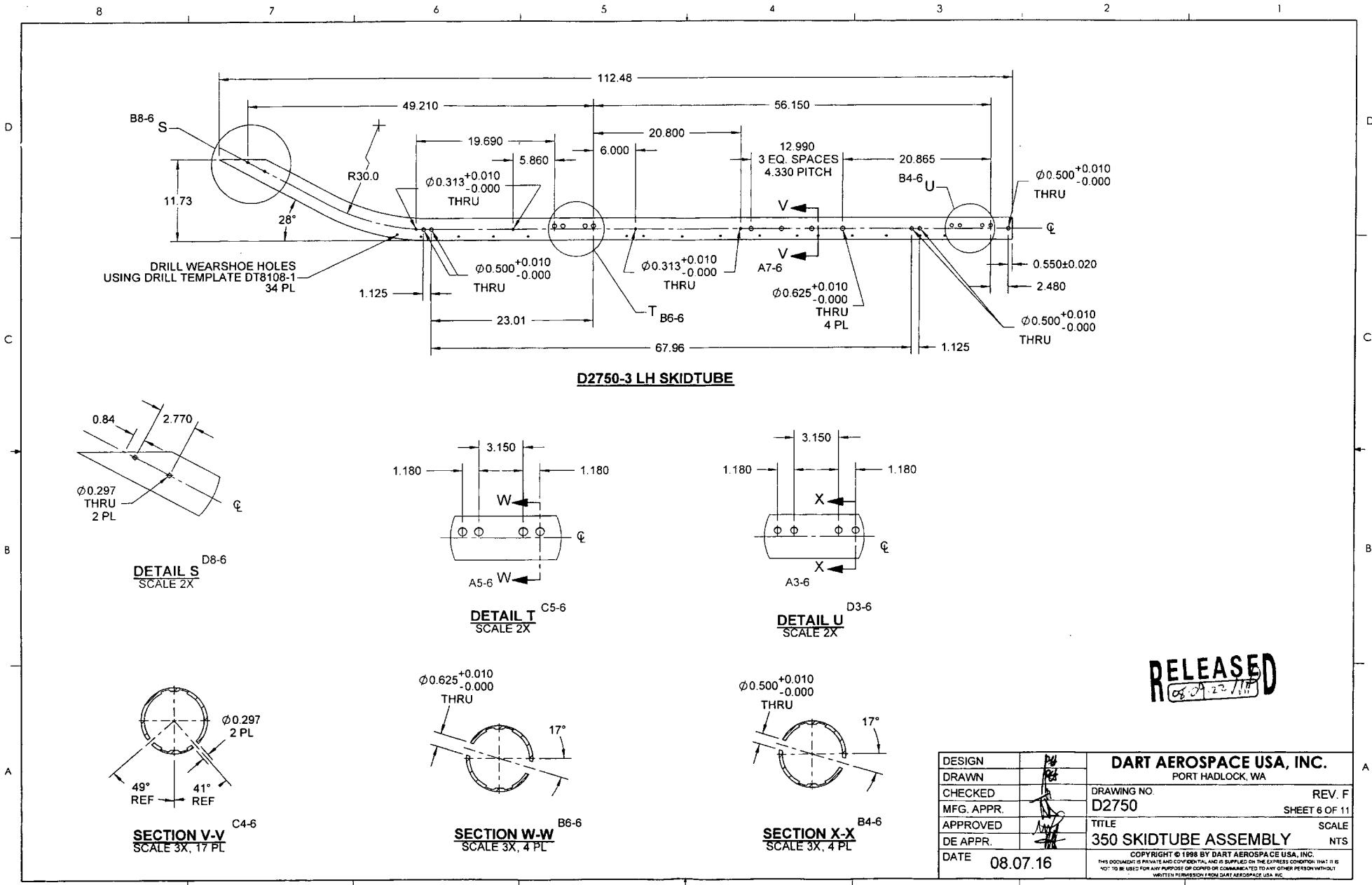
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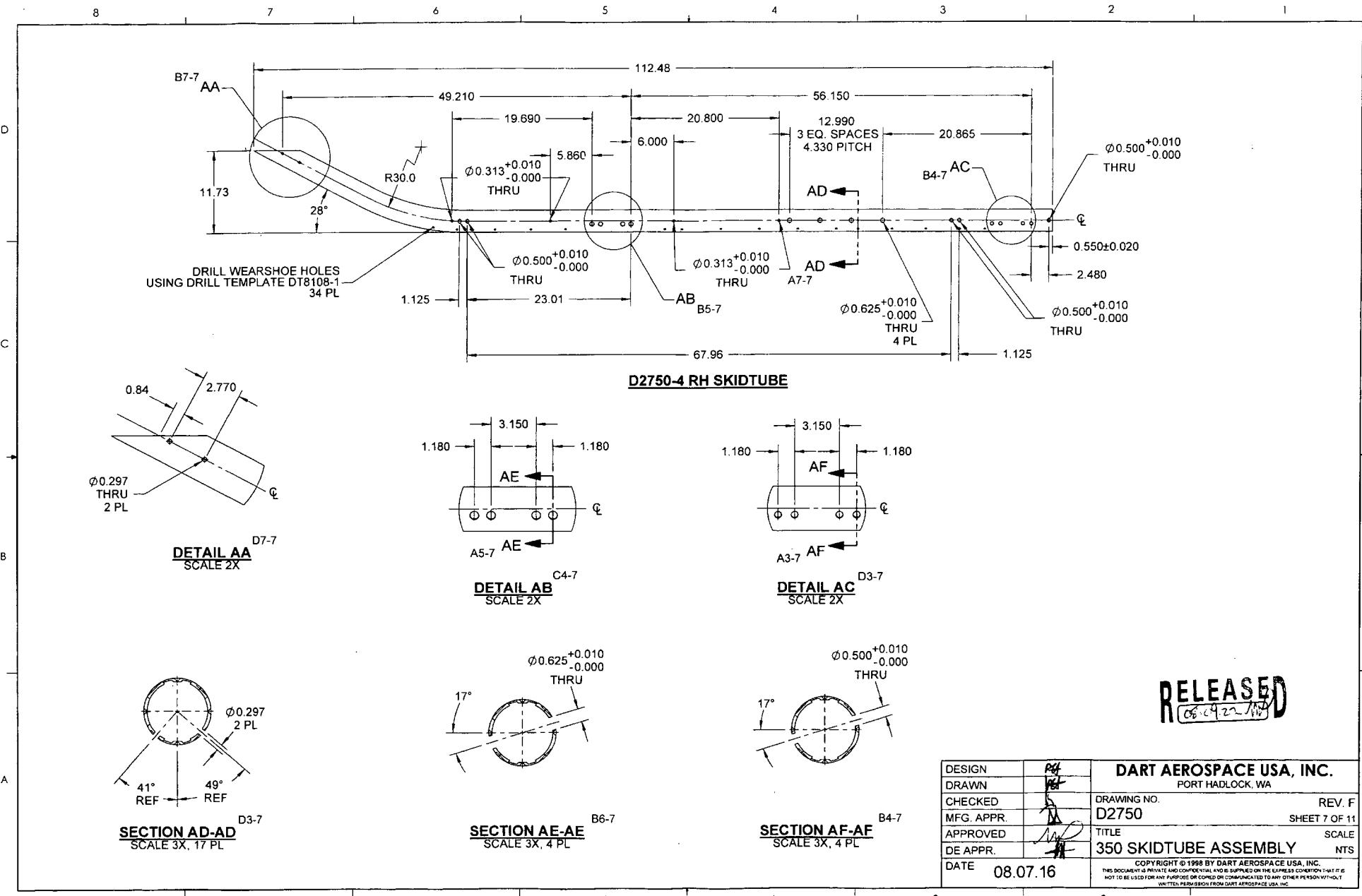
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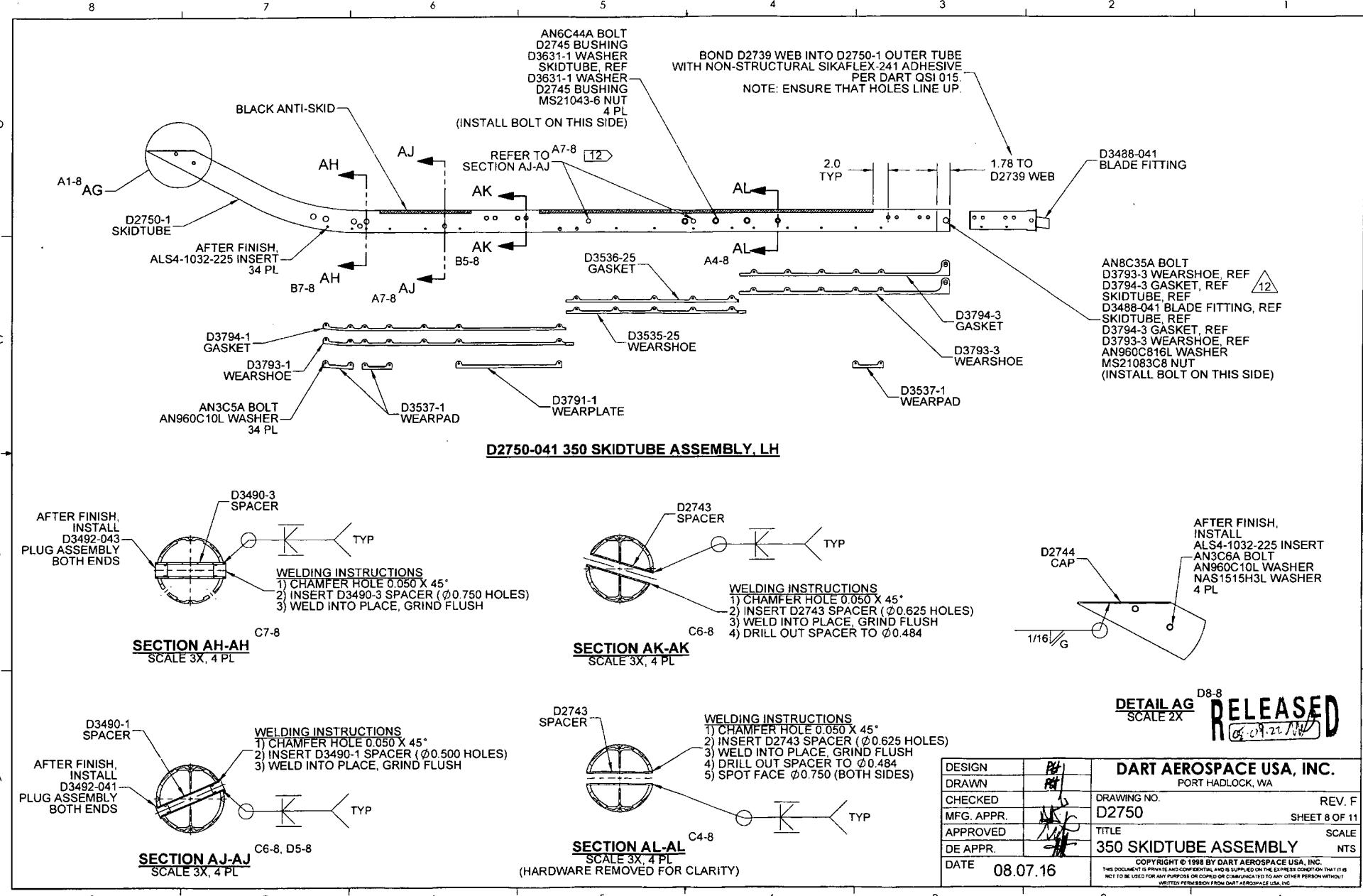
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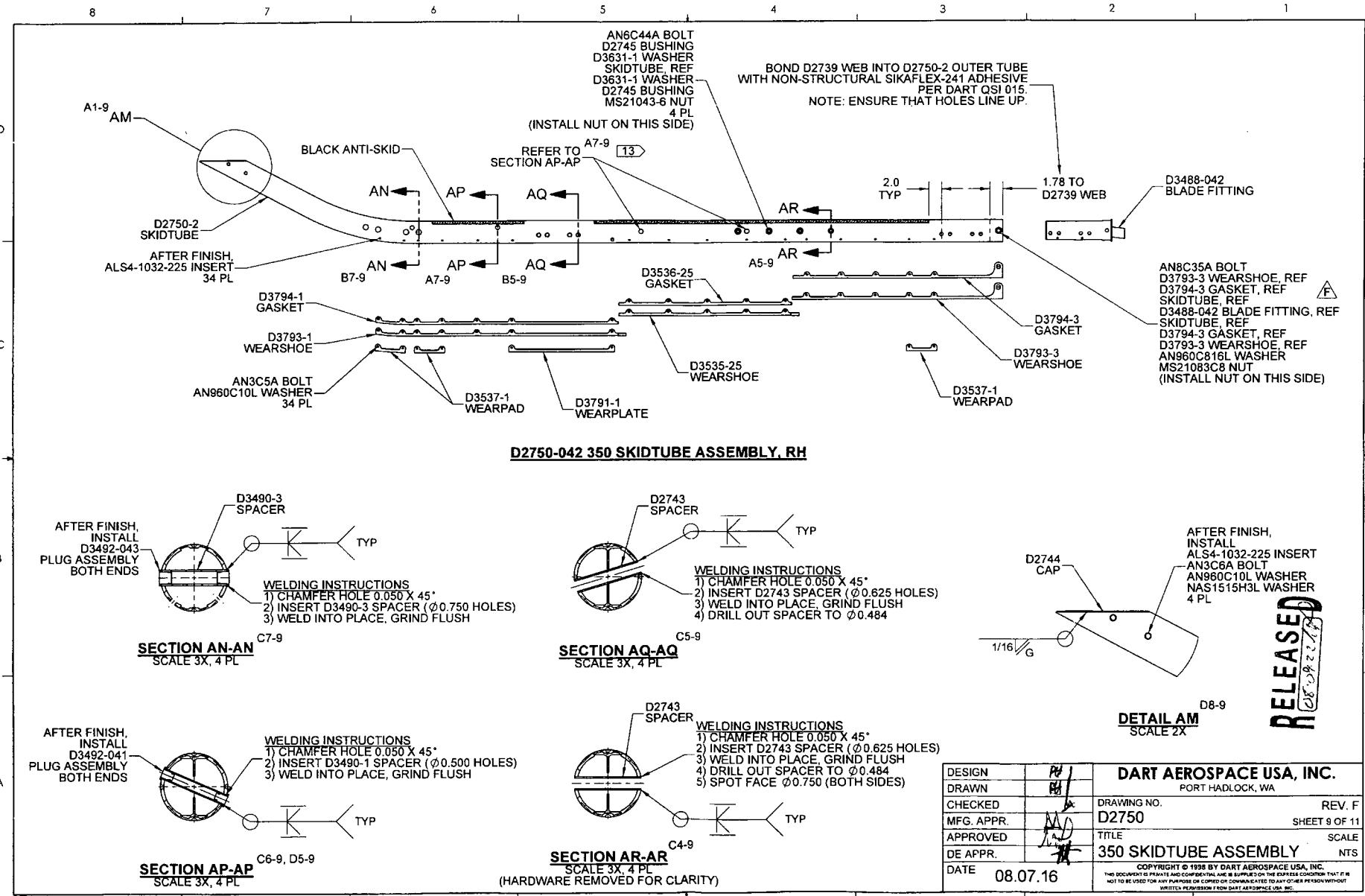
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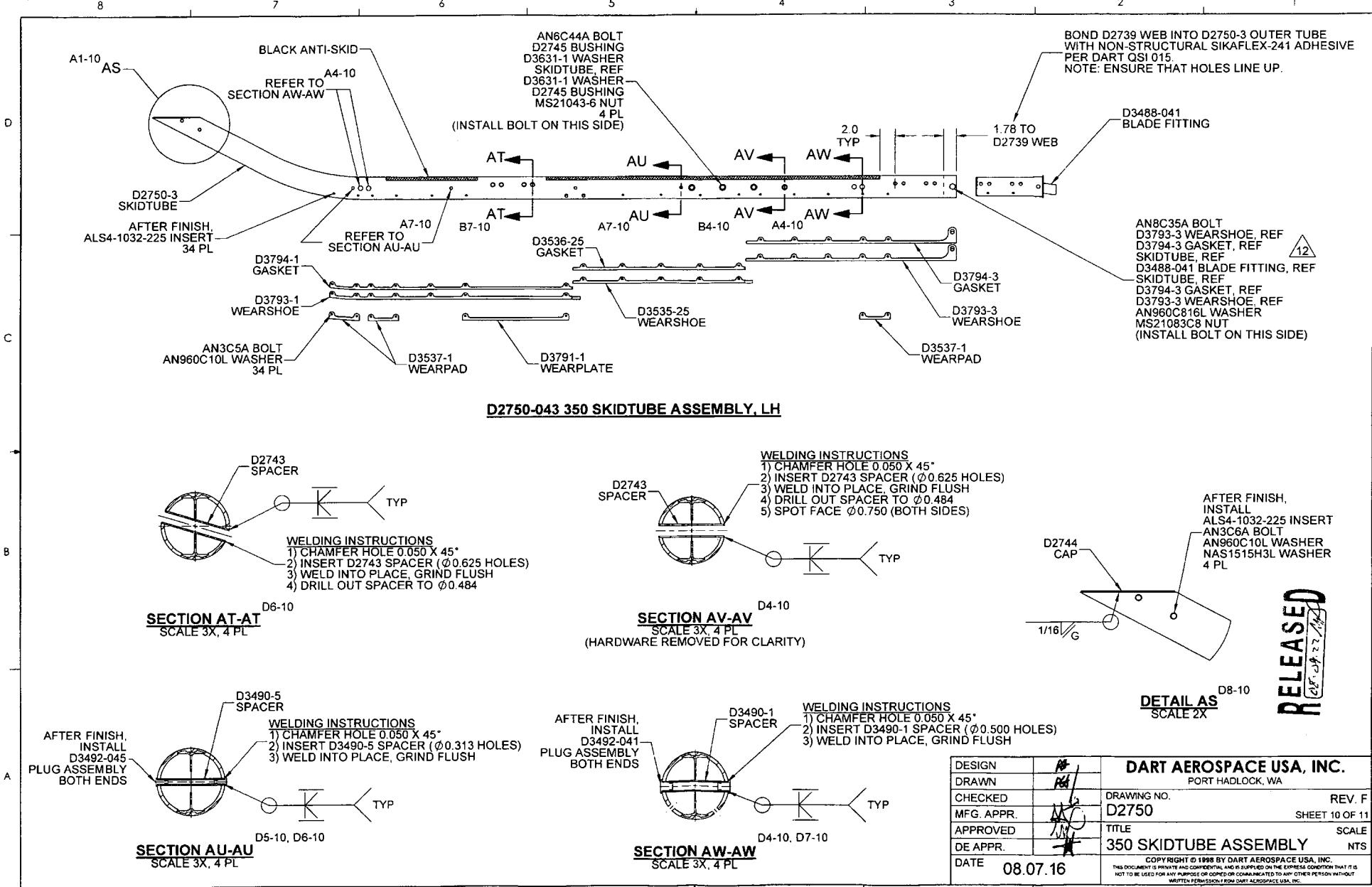
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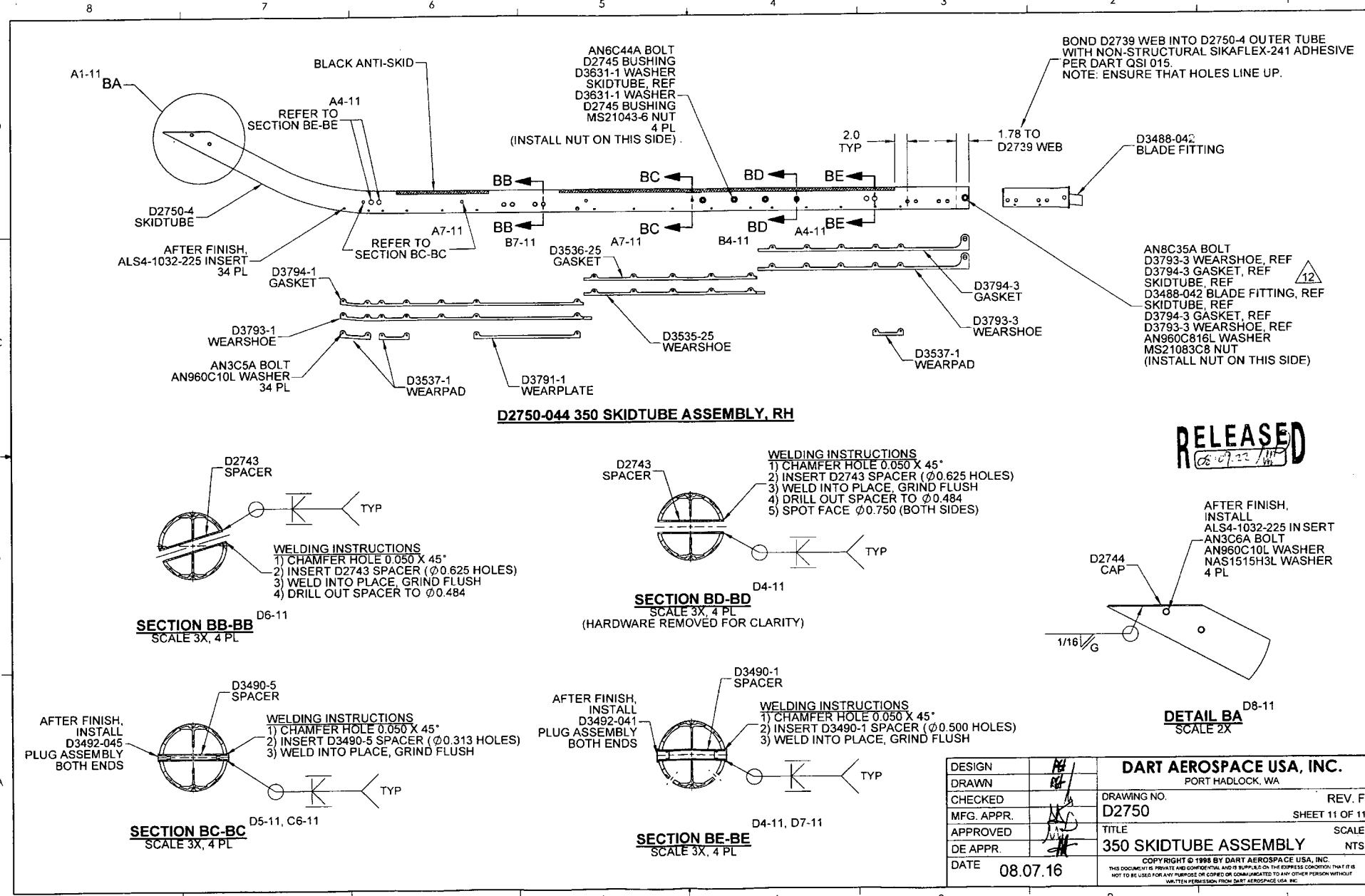
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NO. 282

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 78413
Part number: A350-636-011
Description: Skid tube
Welding Process: Tig[] Mig[]
Base materiel: Aluminum
Current: AC[] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[] fail[]
Penetration: pass[] fail[]

UNACCEPTABLE

Cracks: pass[] fail[]
Undercut: pass[] fail[]
Pin holes: pass[] fail[]
Overlap (cold lap) pass[] fail[]
Porosity (surface): pass[] fail[]
Coloration: pass[] fail[]

Qualifier David Newell Date of Test Coupon 12.02.01

Welder Barclay Elliott Date of Test Coupon 12.02.01

The above named individual is qualified in accordance with AWS D17.1.2001 to weld